

Climb the **Biotechnology** Career Ladder



- Develop safer and healthier food supplies
- Analyze crime scene evidence
- Develop and apply medical therapies
- Clean up environmental hazards



Department of Workforce Services
Workforce Development and Information Division

Biotechnology

Sample Career Ladder

Profile: Colleen Hough, Ph.D.

Present Position:

Application Scientist, Idaho Technology Inc. Salt Lake City, Utah

Education:

PhD: Developmental and Cell Biology, University of California

MS: Microbiology, Washington State University

BS: Biology, University of California

Future Goal:

To lead own group of research & development scientists and technicians.



"I want to develop new genotyping applications and technologies and to design products that will increase the ability of researchers around the world to identify disease-causing mutations, thus enabling them to improve diagnostics and treatment."

Senior Staff Scientist (Biochemist)

Occupation

Inexperienced wage per hour: \$ 18.00 (2005 data)

Required training: Doctorate

Lab Manager (Natural Sciences Mgr)

Occupation

Inexperienced wage per hour: \$ 22.70

Required training: Bachelor's + experience

Lab Technician (Biological Tech)

Occupation

Inexperienced wage per hour: \$ 9.50

Required training: Associate Degree

Medical Clinical Lab Technologist

Occupation

Inexperienced wage per hour: \$ 17.10

Required training: Bachelor's Degree

PREREQUISITE SKILLS:

High School Diploma/GED
Laboratory Experience (two years)
Knowledge of biological and chemical concepts
Work Readiness Skills

Build your own Biotechnology

Career Ladder



Picture yourself here!

Occupation
Inexperienced wage per hour: \$ _____
Required training/experience: _____
Target completion date: _____
Training institution: _____
Funding: _____

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NOTES:

Biotechnology Career Ladder

Source: Utah Occupational Wages, May 2007
(data collected May 2006)

Department of Workforce Services, Workforce Information. Updated April 2008

Professional Degree	2004-2014 Outlook	Hourly Wage Inexperienced	Hourly Wage Median	Training Level
Microbiologists	***	\$16.36	\$22.07	Doctoral Degree
Biochemists and Biophysicists	***	N/A	36.69**	Doctoral Degree
Bachelor's Degree or Higher	2004-2014 Outlook	Hourly Wage Inexperienced	Hourly Wage Median	Training Level
General and Operations Managers	*****	22.27	35.57	Bachelor's or higher + work experience
Engineering Managers	*****	33.82	45.29	Bachelor's or higher + work experience
Sales Managers	*****	22.73	37.99	Bachelor's or higher + work experience
Marketing Managers	*****	23.86	37.99	Bachelor's or higher + work experience
Computer and Information Systems Managers	*****	28.00	40.25	Bachelor's or higher + work experience
Natural Sciences Managers	**	29.36	38.83	Bachelor's or higher + work experience
Mechanical Engineers	*****	26.19	34.69	Bachelor's Degree
Industrial Engineers	*****	24.95	27.61	Bachelor's Degree
Computer Systems Analysts	*****	21.06	30.22	Bachelor's Degree
Electrical Engineers	*****	25.16	35.73	Bachelor's Degree
Biomedical Engineers	*****	25.67	34.08	Bachelor's Degree
Chemists	*****	19.21	26.16	Bachelor's Degree
Computer Programmers	*****	19.41	22.28	Bachelor's Degree
Medical and Clinical Laboratory Technologists	***	17.34	23.22	Bachelor's Degree
Accountants and Auditors	***	17.02	24.04	Bachelor's Degree
High School/GED + Training	2004-2014 Outlook	Hourly Wage Inexperienced	Hourly Wage Median	Training Level
Electrical and Electronic Engineering Technicians	*****	12.43	22.54	Associate Degree
Chemical Technicians	*****	11.04	15.92	Associate Degree
Mechanical Engineering Technicians	*****	14.32	20.39	Associate Degree
Industrial Engineering Technicians	*****	15.85	24.68	Associate Degree
Computer Support Specialists	*****	11.47	16.77	Associate Degree
Medical and Clinical Laboratory Technicians	**	9.89	12.61	Associate Degree
Biological Technicians	**	10.08	13.48	Associate Degree
Industrial Machinery Mechanics	*****	14.99	20.12	Long-term on-the-job training
Compliance Officers, Except Agriculture, Construction, Health & Safety, and Transportation	*****	13.32	16.97	Long-term on-the-job training
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	*****	14.33	23.29	Moderate-term on-the-job training
Executive Secretaries and Administrative Assistants	*****	12.50	16.10	Moderate-term on-the-job training
Maintenance and Repair Workers, General	*****	9.56	14.18	Moderate-term on-the-job training
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	*****	16.68	26.81	Moderate-term on-the-job training
Customer Service Representatives	*****	8.89	11.89	Moderate-term on-the-job training
Secretaries, Except Legal, Medical, and Executive	*****	9.13	12.49	Moderate-term on-the-job training
Bookkeeping, Accounting, and Auditing Clerks	*****	9.85	13.32	Moderate-term on-the-job training
Production, Planning, and Expediting Clerks	*****	10.56	13.52	Short-term on-the-job training
Maintenance Workers, Machinery	*****	10.83	16.44	Short-term on-the-job training
Industrial Truck and Tractor Operators	*****	9.69	12.47	Short-term on-the-job training
Shipping, Receiving, and Traffic Clerks	*****	8.70	11.24	Short-term on-the-job training
Stock Clerks and Order Fillers	*****	7.65	10.18	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers, Hand	*****	7.65	10.00	Short-term on-the-job training
Packers and Packagers, Hand	**	6.11	7.20	Short-term on-the-job training
Purchasing Agents, Except Wholesale, Retail, and Farm Products	*****	N/A	22.49**	Work experience in related occupation
Industrial Production Managers	*****	24.04	35.67	Work experience in related occupation
BIOMANUFACTURING OCCUPATIONS	2004-2014 Outlook	Hourly Wage Inexperienced	Hourly Wage Median	Training Level
Machinists	*****	11.90	18.03	Long-term on-the-job training
Inspectors, Testers, Sorters, Samplers, and Weighers	*****	9.14	13.70	Moderate-term on-the-job training
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	*****	8.53	11.55	Moderate-term on-the-job training
Mixing & Blending Machine setters, Operators, and Tenders	*****	9.85	12.98	Moderate-term on-the-job training
Team Assemblers	*****	8.17	10.52	Moderate-term on-the-job training
Molding, Coremaking, and Casting Machine Setters, Operators & Tenders, Metal & Plastic	*****	8.69	11.10	Moderate-term on-the-job training
Extruding, Forming, Pressing and Compacting Machine Setters, Operators and Tenders	*****	8.72	10.78	Moderate-term on-the-job training
Packaging and Filling Machine Operators and Tenders	*****	7.85	10.71	Short-term on-the-job training
Electrical and Electronic Equipment Assemblers	*****	8.00	10.24	Short-term on-the-job training
Electromechanical Equipment Assemblers	**	N/A	13.25**	Short-term on-the-job training
First-Line Supervisors/Managers of Production and Operating Workers	*****	13.80	21.42	Work experience in related occupation

For more information, go to: <http://www.jobs.utah.gov/careers/biotechnology>

Data for these occupations applies across all industries; it is not specific to biotechnology.

* For more information on the "star" rating system, please go to: <http://jobs.utah.gov/wi/pubs/adultcareerguide/topfivestarjobs.pdf>

**national data